

CHARGE NUMBER: 2100
PROJECT TITLE: Smoke Filtration
PERIOD COVERED: November 1 - November 30, 1973
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I. New Cigarette Development

A. Exposed Plastic 100's

RP³ testing of an exposed plastic 100 mm cigarette with white ring-tipping indicated that the appearance of the cigarette was rated significantly high on a 1-5 point scale ranging from "well below average appearance" to "well above average appearance". After smoking, the cigarette appearance was rated on a 1-9 point scale ranging from "dislike extremely" to "like extremely" and judged to be between "like slightly" and "like moderately".

The feel of the plastic filter in the mouth was acceptable.¹

Regular white-tipped Marlboro 100's are in RP³ testing. Initial results indicate the regular Marlboro 100's to be rated equal to the exposed plastic 100 in appearance.

SEF screening of various printed ring-tippings was completed. Instead of testing the preferred ring-tipped exposed plastic 100 mm cigarette on RP³ as previously reported, the preferred ring-tipped cigarette will be tested on a POL National mailout. The control will be a Marlboro 100 with the same tipping design as present on the ring-tipped experimental.

B. Reduced Delivery Virginia Slim Cigarettes

An experimental 100 mm Virginia Slim with an all-CA filter and Hauni dilution and 4 mg lower in tar than the current Virginia Slim was assembled. Evaluation by the Flavor Group indicated the reduced delivery Virginia Slim to be an acceptable candidate for further subjective testing versus the current Slim.²

An SEF hand-out test found the experimental Slim to be equally preferred to the control. RP³ testing of this latest experimental Slim is planned for January, 1974.³

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C. Cigarettes with Flavor Particles on Tow

Attempts to develop a cigarette with an active carbon-menthol filter by depositing starch-based menthol particles and carbon on the inner section of a dual filter have been unsuccessful. Although an acceptable amount of menthol is available in the filter, an insignificant amount (<0.1 mg) is delivered in the mainstream smoke. The cigarette is subjectively unacceptable. Apparently the menthol is adsorbed by the carbon as it is released to mainstream smoke.

No further work is planned at this time to develop the active carbon-menthol filter with the starch-based menthol powder.

RP³ testing of 10-12 mg tar cigarettes with cherry and cinnamon particles on the inner section of a dual CA filter has been initiated.

D. Modified Parliament 85/80

HTI results indicated the modified Parliament 80 cigarette to be equally acceptable to Parliament 80 and non-Parliament smokers.

Final cigarette specifications are being written for the modified Parliament 80 and will be transferred to Manufacturing.

A test market is planned for the modified Parliament 85/80 cigarettes.

E. 10 mg Parliament Cigarette

A program has been initiated to develop a 10 mg tar Parliament cigarette similar in appearance and taste to the modified Parliament 85/80 cigarette. The filter systems being considered to achieve the 10 mg candidate are as follows:

1. High RTD CA with perforated hard mouth-piece paper and perforated tipping.
2. High RTD CA with perforated cigarette paper.
3. High RTD CA with Hauni pin dilution into the filter.
4. High RTD CA with Hauni pin dilution into the tipping over the tobacco rod.
5. CA/MT fluted plastic dual with dilution through perforated tipping into the CA.

All of the above models have been demonstrated on Parliament CFF rods. Plans call for a cost study on all five filter candidates to be completed by the end of December, 1973. Subjective testing through RP³ is to be completed by February, 1974, with HTI testing on the preferred model(s) initiated in February.

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F. 85 mm Slim Marlboro Cigarette

The redesigned 85 mm Slim Marlboro was not equivalent in tar and puff count to the standard Marlboro 85. A remake of the 85 mm Slim Marlboro is underway to achieve equal tar and puff count.⁶

RP³ monadic testing of both the standard 85 mm and Slim Marlboro will be completed in January, 1974.

II. Cigarette Component Investigations

A. Spheropore A and B

Further investigation into molding grooved filter rods of Spheropore A will be discontinued. Efforts to control the non-uniform shrinkage of the rods in the mold have been unsuccessful.

Evaluation of additional samples of Spheropore B from Monsanto indicate TPM efficiencies ranging from 75-80% for both grooved rods and granular materials. However, the friability of these materials will have to be further improved.

A meeting with Monsanto personnel is planned for early January, 1974, to review the Spheropore materials.

B. B.F. Goodrich MP

Additional SEF testing of various batches of B. F. Goodrich MP material indicated no significant taste differences from batch to batch.⁷ Currently, RP³ testing of B. F. Goodrich MP material (70% TPM efficiency) is planned for January, 1974. For this test, all MP filters will be produced using the Baumgartner P-S-P filling unit (90% space-fill). A stiff plug wrap has been obtained for the Baumgartner unit to give acceptable rigidity to the MP filters.

Recently, B. F. Goodrich indicated some problems in batch to batch MP reproducibility due to changes in the starting raw materials. These problems are being investigated and should be resolved.

References

1. RP³ Test Coded R-EPF-1
2. N.B. 6325 - 91

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3. SEF Booth Test, "Va. Slim 100, X8D3BCD vs. 4 mg Reduced Va. Slim X8D3BCE", December 6, 1973.
4. N.B. 6316 - 31.
5. HTI Test of Experimental Parliament 80 vs. Production Parliament 80, Project #3044/3045.
6. N.B. 6325 - 94.
7. Test Results, MP Goodrich Coded G3MX and G3MW "C" vs. MP Goodrich Coded G3MV "E", December 5, 1973.

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